ATARI®

in Action

Volume 1. Number 1. **Newsletter of the Atari Institute for Educational Action Research** Fall 1982

Atari Institute Board of Advisors

Dean Brown, *Ph.D., physicist, educator, computer systems designer, president, Picodyne Corporation*
Judy Collins, *contemporary pop singer, musician, recording artist*
Hugh Downs, *author, television celebrity, host of ABC's* 20/20
Marian Wright Edelman, *attorney, civil rights leader, president, Children's Defense Fund*
Roger C. Faxon, *vice-president and chief operating officer, Lucasfilm Ltd.*
W. Tim Gallwey, *author, educator, founder of Inner Game Corporation*
Sam Gibbon, *consultant, Children's Television Workshop and Bank Street College of Education*
Herbert Kohl, *author, teacher, director of Coastal Ridge Research and Education Center*
Paul Trachtman, *science editor for* Smithsonian Magazine, *editor of* CYBERNETICS
Heinz Von Foerster, *Ph.D., biologist, lecturer, leading researcher in cybernetics and general systems theory*
William (Sandy) Wagner, *Ph.D., teacher, computer education coordinator for Santa Clara County Office of Education, a founder of Computer-Using Educators*
Karl Zinn, *Ph.D., computer educator and research scientist, Center for Research on Learning and Teaching, University of Michigan*

Atari Institute Executive Committee

Raymond E. Kassar, *chairman and chief executive officer, Atari, Inc.*
Dennis D. Groth, *executive vice-president, Atari, Inc.; chairman, Atari Institute Executive Committee*
Alan Kay, *Ph.D., vice-president and chief scientist, Atari, Inc.*
Steve Mayer, *vice-president, research and development, Atari, Inc. — Home Computer Division*
Peter Rosenthal, *Ph.D., vice-president, business planning, Atari, Inc. — Home Computer Division*
Roger Smith, *vice-president, corporate affairs, Warner Communications Inc.*

Atari Institute Staff

Ted M. Kahn, *Ph.D., executive director*
Sandra Williams, *manager, program development*
Priscilla Watson, *manager, New York office*
Valerie Mendoza, *program administrator*
Bennie Hooker, *executive secretary*
Sherman Rosenfeld, *Ph.D., consultant*

Published by Atari, Inc.

The Atari Institute's First Year — a look back and a glance ahead

I believe it was Albert Einstein who once defined the present as "the point where the past meets the future." While this concept may seem quite simple, it has deep meaning for the dynamic growth of the Atari Institute for Educational Action Research. The Institute is formally not even a year old; yet, in just over nine months of gestation, we have given birth to project grants of over $550,000 worth of ATARI Home Computer products and cash stipends. These grants span the entire cycle of lifelong learning in environments as diverse as the poverty-stricken barrio of Austin, Texas; a recreational center for the handicapped in San Francisco; children's museums and science museums; and the rural and urban schools and colleges of this country. The people and geography of computer uses in education covered by these grants are also diverse — from parents and young children at home, to teachers, to Native American and Chicano high school students in New Mexico, to community college students in rural Greenfield, Massachusetts.

As the Institute's activities have continued to evolve, so has its staff. Four dedicated people comprise a full-time staff in Sunnyvale: Sandra Williams, Valerie Mendoza, Bennie Hooker, and I. In addition, Priscilla Watson, our representative on the East Coast, and talented consultants Pat Cleland and Dr. Sherman Rosenfeld have provided encouragement and guidance for special projects.

The Institute's Board of Advisors and Executive Committee are the finest group of individuals with whom I have ever had the privilege of working. Their vision, intuition, and good common sense are the driving force of our motion and growth.

▲ *Ted Kahn*

But what is the Institute, really? It is **people** — people with boundless energy, clear vision, and a firm commitment to improving education and learning for all. While grants are formally given to non-profit educational projects or institutions, they are really given to talented individuals (see list of grantees for 1981-82). The development of new hardware or software ideas may be natural by-products of Institute grants; however, the true value of the projects is what is done by and for people. We are engaged in supporting what John W. Gardner called the process of "self-renewal" of this country.

Having attended congressional hearings on Mr. Jean Jacques Servan-Schreiber's recently announced World Center for Computer Science and Human Resources (a major $20-million-per-year enterprise under French President Francois Mitterand), I can't help but admire the power of the Atari Institute's modest contribution program. We have already shown, through such carefully chosen projects as the Industry Education Council-Atari Mobile Computer Van in Santa Clara, CA; and the *FUTURE*

continued on page 2

continued from page 1

CENTER and *Communications* exhibit at the Capital Children's Museum in Washington, DC, that good models will generate far more ideas and active programs than we could ever have imagined. For example, more than 100 members of the U.S. Congress were given a computer literacy course by the staff of the Capital Children's Museum in our national Capitol. And in less than one year of operation, the IEC-Atari Mobile Computer Van is being looked at as a national model for providing computer access to schools and communities.

In short, this is what educational action research is all about: finding and implementing model field research projects whose results will help us make better decisions about education now and in the future.

The concept of "action research" was developed in the 1940's by social psychologist Dr. Kurt Lewin. Lewin had a deep sensitivity to social problems and a commitment to use his resources as a social scientist to do something about them. He drew a triangle to represent the interdependence of research, training or education, and action in producing social change.

ATARI in Action

Managing Editor
Pat Cleland
Assistant Editors
Lois DuBois
Herb Moore
Writers and Contributors
Ernie Hickson
Ted Kahn
Herbert Kohl
William (Sandy) Wagner
Graphic Design/Production
Nancy Tobler
Photography
Mark Tuschman
Printing
House of Printing

© 1982 Atari, Inc.
All Rights reserved

The vision of the Atari Institute for Educational Action Research is to demonstrate how the power of the smallest chips of silicon, when given to our most valuable resource — people with energy, vision, and commitment — can unleash massive expansion of human potential and give the people of our generation and future generations the most valuable gift of all — the gift of creative lifelong learning and continuous self-renewal.

Ted M. Kahn, Ph.D.
Executive Director

Ted M. Kahn has been active in research, development, and implementation of computer education programs for over twelve years. He has an A.B. in computer science and an M.A. and Ph.D. in psychology, all from the University of California at Berkeley.

While an undergraduate, he developed Computer Assisted Instruction programs for high school physics instructors. In 1971, he was one of the founding teachers of the Computer Education Project at the University of California's Lawrence Hall of Science.

Dr. Kahn spent two years in Israel as a visiting scholar and research associate at the Centre for Educational Technology and the School of Education at the Hebrew University of Jerusalem, where he developed ideas for improving creative thinking of both students and teachers.

In 1975, he returned to the U.S. to finish his doctoral research in psychology, funded by a fellowship from the National Institutes of Health and the Learning Research Group at the Xerox Palo Alto Research Center (PARC). While at Xerox PARC, he used the Smalltalk programming language to develop interactive games to stimulate scientific thinking and problem-solving skills.

In 1979, Dr. Kahn was hired as an educational consultant for Atari to advise and develop approaches for educational marketing of home computers. He subsequently founded and is now Executive Director of the Atari Institute for Educational Action Research.

Dr. Kahn has been a speaker at numerous conferences and conventions and has recently completed his first book, *ATARI® Games & Recreations* (Reston), co-authored by Herbert Kohl, Len Lindsay, and Pat Cleland. He is an avid musician, tennis player, and self-declared "educational alchemist" interested in the networking of people and ideas.

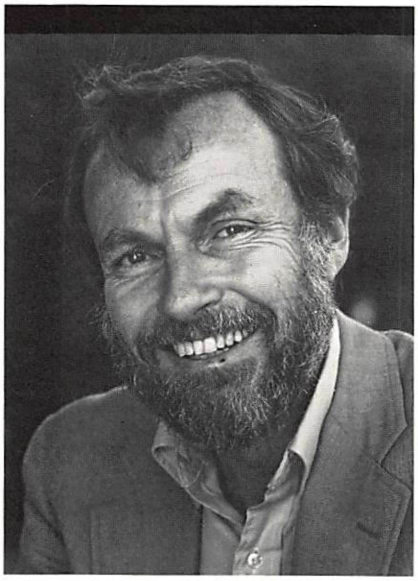
From the Board of Advisors

Computers, Teachers, and Public Schools

I think I was one of the first users of microcomputers who had no interest in how the machine worked or was put together. I saw it, in 1977, as an inexpensive way to bring programming to a wide range of students in an urban high school. Then, as now, I believed it possible to teach a meaningful course in programming to any interested high school student. And I also believe public schools have the obligation to provide universal access to computing, to counter the potential increase in a technological gap caused by the purchase of microcomputers for more affluent homes.

Needing a lot of help getting started, and out of self-defense, I put out a call for interested computer educators to meet and share ideas and experiences. This led to the founding of Computer-Using Educators (CUE), which has grown to over 3000 members across the country. CUE has benefitted from the amazing energy which computers have unleashed in teachers. It has a bimonthly newsletter, several major conferences a year, and a software library (SOFTSWAP) which has distributed over 3000 disks of teacher-written educational programs around the world.

My involvement with Atari began by participating in one of the first projects



▲ ***Sandy Wagner***

to be sponsored by the Institute, the IEC-Atari Mobile Computer Van. The Van is a credit to Ernie Hickson, IEC's Executive Director, who masterminded every detail and brought together representatives from industry and education to back the project. Its success can be measured by the willingness of schools to pay the fees, and by their interest in doing more with computers (particularly ATARI Home Computers) after the Van leaves.

A great need for teacher training continues as more and more schools see the need for providing computer access to their kids, but are unable to expand their staffs. For the past two years I have concentrated on staff development in my job as Coordinator of Computer Education for Santa Clara County ("Silicon Valley") Office of Education. Teachers are responding very well to the challenge of learning something new in order to improve their teaching. They are beating down our doors and filling every workshop. It is a teacher's dream to be sharing information that others want so eagerly.

William (Sandy) Wagner, Ph.D.
Atari Institute Board of Advisors Member

William J. (Sandy) Wagner has a S.B. in Metallurgy from the Massachusetts Institute of Technology, a M.A.T. in Mathematics from Wesleyan University, a M.S. in Statistics, and a Ph.D. in Education from Stanford University. Dr. Wagner's fields of expertise include the applications of computers in education, training and staff development on computer applications, design and evaluation of educational programs, and applied mathematics and statistics. He was a high school teacher for 16 years and is now serving as the Coordinator of Computer Education for the Santa Clara County Office of Education.

In 1978 he was one of the founders and first president of Computer-Using Educators. CUE is now the nation's largest grass-roots organization of teachers and others working to promote the improvement of education through constructive uses of computers.

▲ CUE Membership is available by sending $6 within the U.S. ($8 Canada, $16 elsewhere) to: CUE Membership, P.O. Box 18547, San Jose, CA 95158. The *SOFTSWAP Catalog* can be obtained by sending $1 to: Microcomputer Center, SMERC Library, San Mateo County Office of Education, 333 Main St., Redwood City, CA 94063.

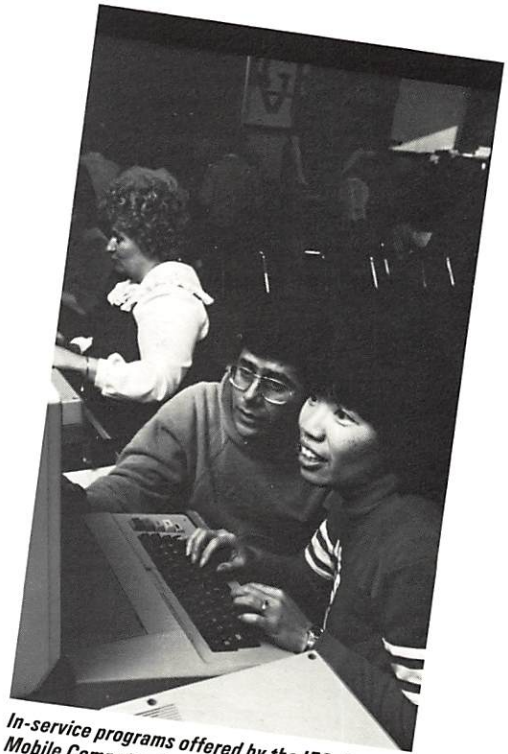
Teachers are learners too!

On Education and Computers

Times have changed during my career but I believe that my main concerns have not. I am concerned that all of the children in our society have an education that empowers them and that releases the creative capacities they are born with. I am also concerned that social, racial, and economic equity become a reality in our nation so that no child has to grow up with the horrors of poverty and discrimination. In more specifically educational terms I believe that learning should be an active, participatory venture that encourages questioning, experimentation,

continued on page 4

Teachers at Vinci Park School in San Jose, California, enjoy "hands-on" learning. Information and support is provided by Zoann Brinkman — experienced elementary teacher and computer resource person.



In-service programs offered by the IEC-Atari Mobile Computer Van give teachers a chance to use microcomputers and discover applications for the classroom.

continued from page 3

critical thought, and sensitivity. It does not matter where learning takes place and a child should understand that he or she can be a learner in any situation and throughout life. Flexibility, judgement, and the mastery of tools such as hammers, pencils, computers, paint brushes, and musical instruments are all basic skills in our complex and uncertain society.

With particular regard to the value of computers to young people, I believe they are powerful tools for the development of thought; they are delightful for creating and playing games; they have the capacity to negate bad teaching; and they are toys that help youngsters understand the nature of systems and the control of information. These skills are necessary to thrive in the next decades.

However, it would be foolish to want computers to be essential in every child's life. One of the problems with Basic Skills obsession (either in the computer futuristic mode or in the 3R's fundamentalism) is that too many creative and interesting children are punished for love of music, poetry, dance, painting, theater, and other expressions of human sentiment that are more essential than what computers will ever be able to provide. For me, computers are instruments: complex tools that are neither sacred nor as essential to the sustenance and enrichment of life as the arts and literature. They can be tools for the arts; they can be presented to youngsters as ways to help compose a book, print a poem, sketch a building, or invent a tune. But they are no substitute for the substance of living.

I see computers as a part of our lives, a part that most young children will respond to if they are not forced to forget all the other aspects of being alive. We have a summer school where computers are available to our students and where the teachers are buffs and learners too. The same people teach music, theater, and dance; electronics, photography, and old-fashioned typesetting. I believe this makes more sense than squeezing young people into machines.

Computers are a small but wonderful part of an interesting world. We should know how to use them as we know how to use pencils and typewriters or know how to drive cars, but we should remember that a world consisting of only writers, racing car drivers, or computer specialists is likely to be dull, self-obsessed, unplayful, and not particularly pleasant to live in. If you have children who don't care about computers, then buy a piano, a set of drums, or acrylics. Or simply give them time to figure out what they care about. However, keep the option open for them to learn about computers when it makes sense to them. Computers, like pencils, can be useful without being central; they can be casual sources of pleasures as well as obsessions; and I expect they are going to play important roles in our lives for quite some time.

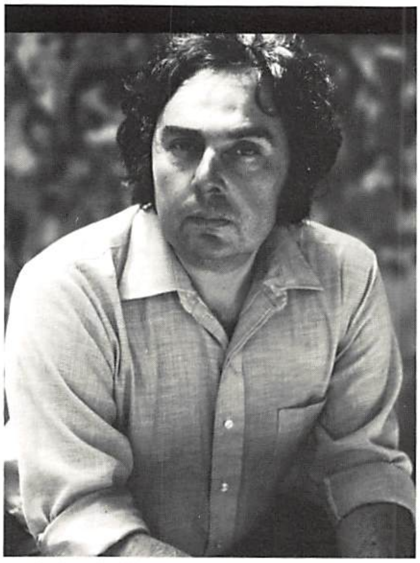
Herbert Kohl
Atari Institute Board of Advisors Member

Herbert Kohl has an A.B. in Philosophy from Harvard College, an M.A. in Special Education from Columbia University Teachers College, and spent a year at Oxford University College.

Mr. Kohl has been teaching and writing about education for the last twenty years. He has worked in public elementary schools in New York and Berkeley, has been a principal of public alternatives high school, has co-directed The Center for Open Learning and Teaching in Berkeley, and has trained teachers.

Among his published books are *The Age of Complexity* (Mentor), *36 Children* (New American Library), *The Open Classroom* (Vintage), *Reading: How To* (E.P. Dutton), *Games, Math and Writing in the Open Classroom* (Random House), *Growing With Your Children* (Little, Brown and Company), *A Book of Puzzlements* (Schocken), and *Basic Skills* (Little, Brown and Company).

Herbert Kohl is founder and director of the Coastal Ridge Research and Education Center in Point Arena, California.



▲ **Herbert Kohl**

Moving Microcomputers into Classrooms

by Ernie Hickson

Computer literacy is fast becoming a skill as basic to productive living and working as reading, writing, and computational skills. It is clear that integrated circuitry and computer technology already have an impact on the everyday lives of consumers, employers, employees, and educators.

The infusion of this technology into our lives has come upon us faster, and with more far-reaching implications, than the introduction of any other technology in history. All trends and projections point out that computer technology will play an increasingly large role in virtually every arena of American life during the balance of this century and beyond.

The challenge to the educational community is clear: schools need to respond quickly, with trained personnel, appropriate software, hardware, and curriculum integration strategies, to provide this new basic skill to students. No matter the socio-economic or geographic setting; today's youth must be provided with the exposure and supervised instruction necessary to function successfully in tomorrow's high-technology environment. Schools and educators must re-tool to include computer literacy as they prepare to fulfill their mission: society's primary provider of living and working skills which empower the people to lead happy, productive lives.

This poses a major problem. Traditional resources available to the schools are inadequate and continuing to dwindle. Schools are forced regularly to reduce services. The result is that school districts can't allocate resources to develop new programs. Other resources are needed to introduce computer literacy in the time demanded.

The COMPUTER VAN program, currently operating through the Industry Education Council of Santa Clara County, addresses these issues. The Van provides a proven, cost-effective method for introducing computer literacy to schools. This model includes private industry, education, and community "buy-in," to increase its validity and viability as a continuing resource.

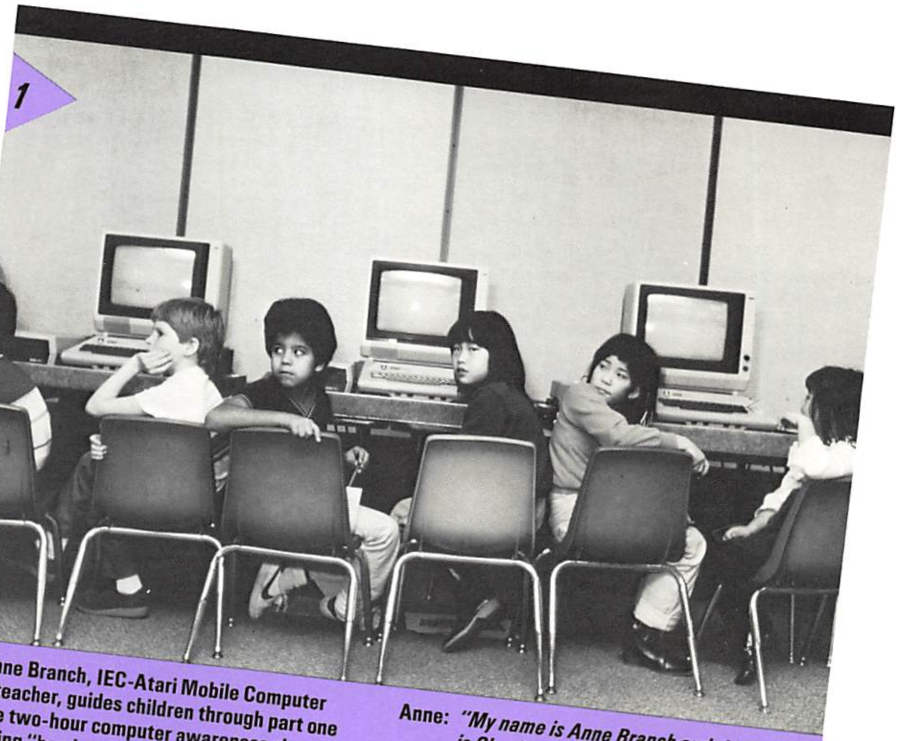
The IEC-Atari Mobile Computer Van

How It All Started

Ernie Hickson, Executive Director of the Industry Education Council (IEC) of Santa Clara County, is responsible for implementing the IEC-Atari Mobile Computer Van project. In late 1979, a task force of the Industry Education Council was formed to establish a computer literacy program in Santa Clara County. This task force included representatives from business, industry, labor, government, and education. The following goal resulted:

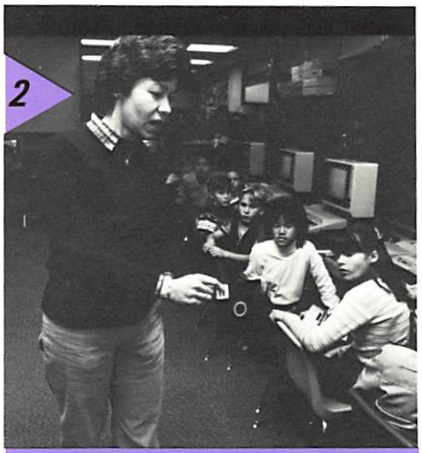
"Within five years, every high school student will have experience controlling a computer or computing system, and will understand the role of computers in society today and in the future."

Hickson's job was to make the goal a reality. He became acquainted with a microcomputer van operated by the Computer Education Project at the University of California's Lawrence Hall of Science. Ernie liked the idea and thought it could be expanded. With the aid of another special task force, he began to reserach ways to make a mobile computer literacy program more cost-effective and educationally viable.



Anne Branch, IEC-Atari Mobile Computer Van teacher, guides children through part one of the two-hour computer awareness class — giving "hands-on" instruction to groups of third, fourth, and fifth graders at Vinci Park School in San Jose, California.

Anne: ***"My name is Anne Branch and this is Glen Walker, we are the people who get to travel around with the Van and give kids a chance to use computers a little bit. It's kinda like getting a taste spoon at the ice cream store — you get just enough to find out that you like it."***



Anne: ***"This is a disk! It's called a mini disk or a floppy disk or a magnetic disk. It has a lot of names but they all mean the same thing. It has a black cover on the outside and the brown shiny part on the inside is the disk."***

From the practical standpoint, he saw the need for sturdy, well-packaged, and highly portable equipment, with some maintenance arrangement to keep it functioning. A realistic appraisal of operating costs such as gas, oil, maintenance for the Van, a driver, and qualified teachers was necessary. A portion of these costs could be offset by fees to users, but in line with the IEC goals of accessible education, the fees had to be kept within reason.

Help from the Private Sector

Ernie actively pursued the support of local microcomputer manufacturers in the form of equipment. In general, the reception was cool — with one exception. Ted Kahn, then a consultant to the Atari Home Computer Division, and Atari executives Peter Rosenthal and Dennis Groth, saw an opportunity to provide a model for computer literacy which would reach the maximum number of students at minimum cost to the schools. From an engineering perspective, it was an opportunity to test the durability of the ATARI Home Computer in a situation requiring constant travel and heavy use.

Atari decided to support the project. Harry Jenkins and the Advanced Products group designed and produced fifteen complete units, mounted in a special carrying case, each consisting of an ATARI 800™ Computer, ATARI 810™ Disk Drive, ATARI 822™ Thermal Printer, and a color monitor. In addition, Atari took responsibility for the interior and exterior design of the Van, agreed to service the ATARI Computer products, and provided three back-up systems to ensure a fully equipped Van at all times.

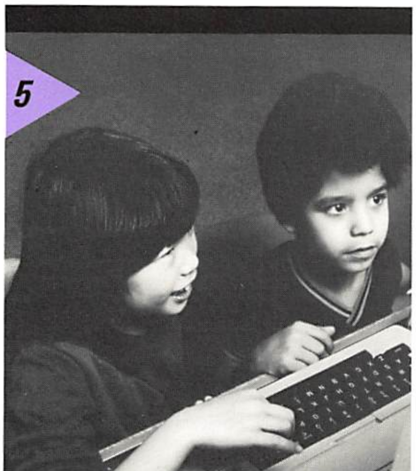
continued on page 6

continued from page 5

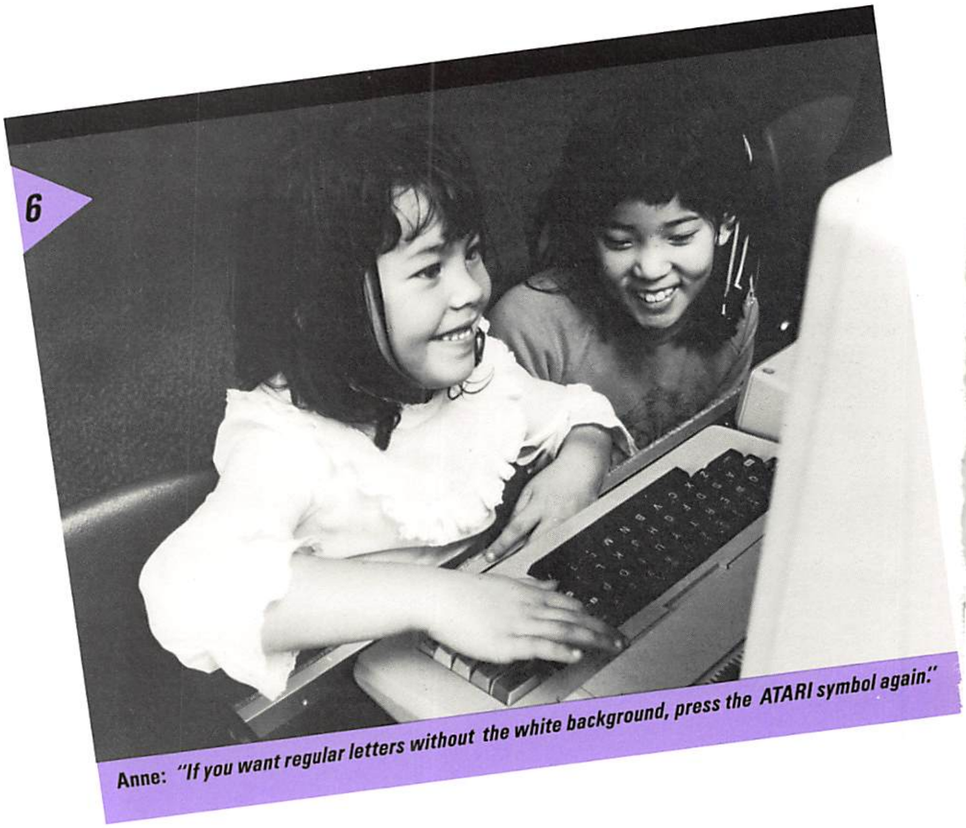
With the promise of equipment and support from Atari, Ernie was able to secure additional support from other sources. Time and cash grants from Pacific Telephone, Lockheed, Tymshare, and $2,500 in gas and oil from Chevron were a start. Additional support came from the County Superintendent's office in the form of reduced maintenance, insurance costs, and storage space for the Van. The Industry Education Council of California, a non-profit organization, made a cash donation of $2,000 toward improved career education and the education-to-work process.

Anne: *"Type the word BYE. After you type BYE and push the RETURN key the screen will say, ATARI COMPUTER MEMO PAD. Memo pad is just like a chalkboard: you can write on it and draw on it."*

Anne: *"Look on your keyboard and find the key that has DELETE BACK S written on it. That key is the eraser. Type something, then push it and see what it does."*



Anne: *"Find the key with the ATARI Logo or Symbol—push it one time and let it go and then type something. Does what you're typing now look different?"*
Kids: *"Yes!" "Oh!" "Hey!"*



Anne: *"If you want regular letters without the white background, press the ATARI symbol again."*

Curriculum from Educators

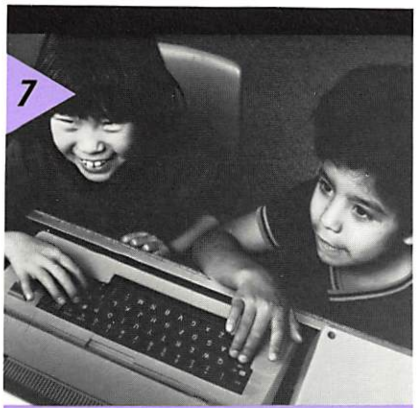
With the equipment and operation costs shaping up, curriculum still had to be developed. Dr. William (Sandy) Wagner and other members of Computer-Using Educators (CUE) proved invaluable by helping to consolidate materials from a variety of resources. A three-part curriculum resulted: A two-hour program to provide computer awareness to students in grades 3 through 6; an eight-hour program to teach elementary programming to students in grades 6 through 12; and a two-hour program to give adults (usually educators) an introductory personal experience with microcomputers and insights to how computers can be incorporated into regular school programs.

The Van in Operation

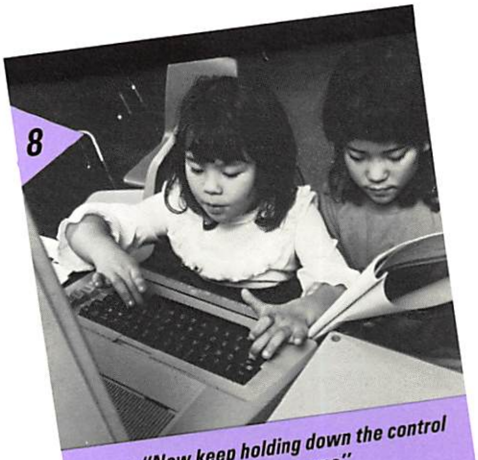
In the spring of 1981, the IEC-Atari Mobile Computer Van project successfully completed a six-week pilot program, serving one community college and 14 schools in six separate school districts. Since that time, the Van program has reached over 8000 students enrolled in 275 classes, in 76 separate schools. The program provides instruction in 17 different school districts mostly serving students in grades 3 through 9. The current fee for the Van is $55 per instructional hour (about $1.83 per student hour) when four hours or more are scheduled at one site. These fees cover only the cost of staff time and office expenses for scheduling and materials.

Ernie Hickson indicated that the extent to which the Computer Van has motivated school districts to begin developing their own computer literacy programs is even greater than he had anticipated. This kind of support and positive response didn't materialize out of the air, but it represents a lot of persistence in presenting an excellent idea to prospective supporters and users.

continued on page 8



Anne: *"Hold down the control key. Keep holding it down and press one of the arrow keys."*
Kids: *"Look at that!" "Yeh!" "Now you do it."*



Anne: *"Now keep holding down the control key and type your name."*
Kids: *"Hey!" "Oh, look at that!" "There aren't any letters."*
Anne: *"On the last page of your Blue Book is a map of the keyboard to show you where all the shapes are hidden. You can use the shapes to make pictures, patterns, and designs."*

Anne: *"The computer doesn't understand very many words, but if you use the words that it knows, you can do a lot of things. When the computer says READY, that means it's ready for you to give it something to do."*

continued from page 7

Future Plans and Other Uses

At first glance, it might appear that the need for the Van will diminish as school districts become more interested in developing their own computer literacy programs and establish their own permanent facilities. However, according to Hickson, "the uses just seem to come out of the woodwork." Equipment that can travel can be used in any number of locations where members of the community gather.

Plans for the future include more inservice training and workshops for teachers and administrators; high school Junior Achievement — Project Business programs; and neighborhood seminars, workshops, and adult education programs. The Van is expected to be available to city recreation departments and other agencies and groups.

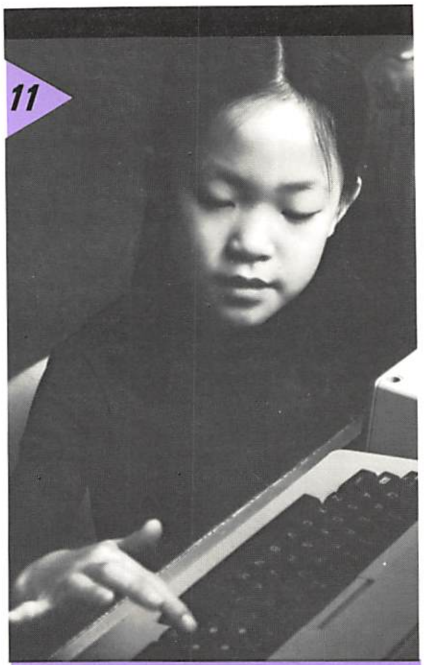
The Project as a Model

This project is a cooperative venture that involves educators, private industry, government, and schools, all working together to achieve a common goal: bringing computer literacy to the entire community.

10

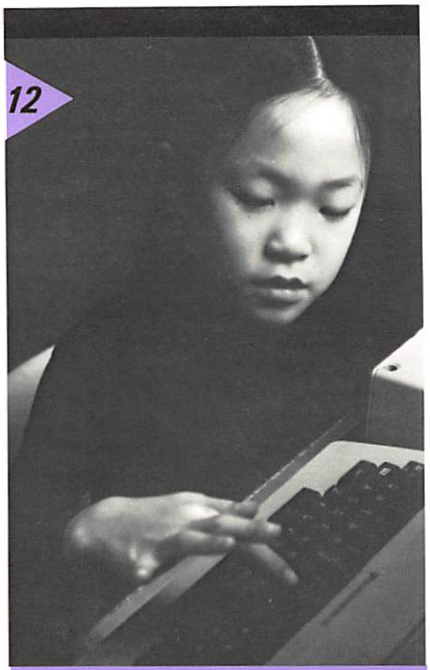
Kids: *"Error!" "I got error!" "It says error!"*
Anne: *"When the computer says error, it's saying, 'Hey, wait a minute; hold it. You told me something I don't understand. You told me something that doesn't follow my rules.'"*

11



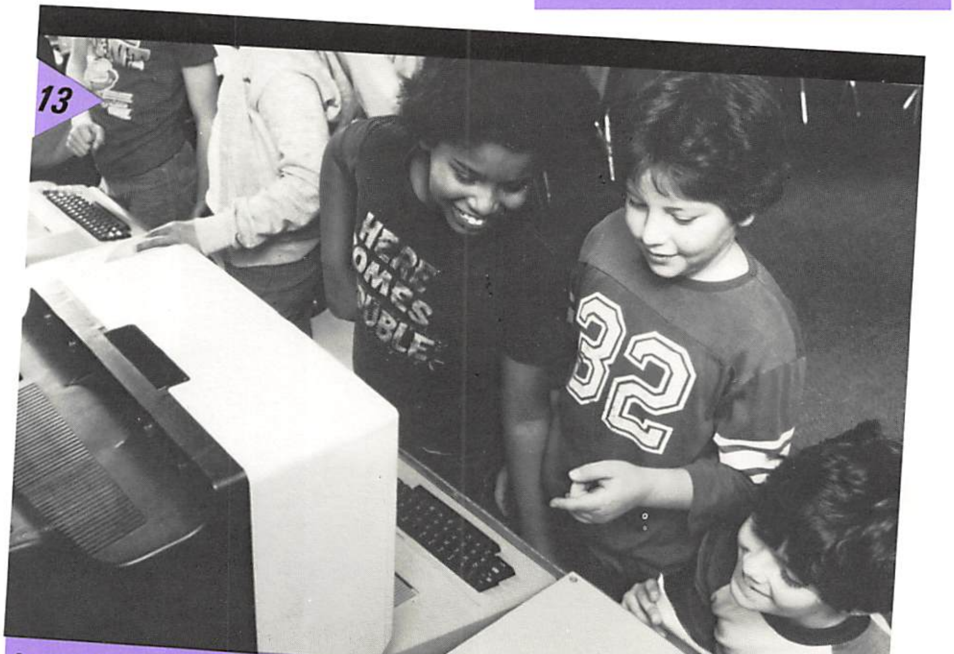
Anne: *"Okay, type PRINT and do not press RETURN. After PRINT type a math problem that you know the answer to — any problem you want as long as you know the answer. When you finish typing your problem, press the RETURN key."*
Kids: *"Wow!" "That's right!"*

12



Anne: *"Push the SYSTEM RESET key and we'll play a game. The game is* Mad Libs** and the computer is going to ask the questions. It will print them on the screen and you and your partner need to decide your answers. After you've finished answering all the questions, the computer will print your story on the screen and will ask you if you would like a printed copy of your story to take home."*

13



Anne: *"When you have finished the game and each have a copy to take home, it will be time for the next class to use the computers. But you will have another chance on Monday."*

*Mad Libs *is a registered trademark of Price, Sloane, Stern, & Co.*

Grants

Pre-Institute Grants

The following three grants were awarded prior to the formation of the Atari Institute for Educational Action Research. They have provided the foundation for model educational action research programs.

CAPITAL CHILDREN'S MUSEUM
800 3RD STREET, N.E.
WASHINGTON, DC 20002

CONTACT PERSONS:
ANN LEWIN, EXECUTIVE DIRECTOR
PETER S. HIRSHBERG, COORDINATOR
COMMUNICATIONS PROJECT

▲ The Capital Children's Museum is a "hands-on" museum whose purpose is to help children learn by doing. Its exhibits are accessible to children and their families, including physically limited and gifted children. Atari granted equipment for use in the following museum activities: ***FUTURE CENTER,*** an ATARI 800™ Home Computer classroom of unique design; ***Communications,*** an exhibit using ATARI Home Computers for "hands-on" activities; ***Super Boots,*** an educational software development effort; and computer enhancements of other exhibits. A cash donation was given for use in developing ***FUTURE CENTER.***

INDUSTRY EDUCATION COUNCIL
OF SANTA CLARA COUNTY
100 SKYPORT DRIVE
SAN JOSE, CA 95110

CONTACT PERSON:
ERNIE HICKSON,
EXECUTIVE DIRECTOR

▲ ATARI Computer products were granted to the Santa Clara County Industry Education Council for use in the ***IEC-Atari Mobile Computer Van Project.*** Design and construction of modular units in special carrying cases and interior and exterior design of the Van was also donated by Atari. (Project details are featured in this issue.)

LAWRENCE HALL OF SCIENCE
MATH & COMPUTER EDUCATION PROJECT
UNIVERSITY OF CALIFORNIA
BERKELEY, CA 94720

CONTACT PERSON:
TWILA SLESNICK, DIRECTOR
MATH & COMPUTER EDUCATION

▲ The Lawrence Hall of Science is a center for research and public education. More than 250,000 visitors every year use computers in Lawrence Hall classes and exhibits. ATARI 800™ Home Computer systems were granted to the Math and Computer Education Project and are featured in the following classes currently at the Hall: ***Art and the Computer; Color and Sound; BASIC Programming*** (Beginning and Intermediate); ***Ms. Math;*** and ***PILOT Your Own Computer.***

Atari Institute Grants (September 1981-April 1982)

The following grants represent more than $550,000 in ATARI Home Computers, ATARI Computer products, and cash stipends.

Pre-School, Non-School, and Informal Learning

BING SCHOOL*
STANFORD UNIVERSITY
850 ESCONDIDO ROAD
STANFORD, CA 94305

CONTACT PERSON:
CAROL LOU YOUNG-HOLT

▲ Bing School is internationally known as a center for innovative research in the area of ***early childhood education.*** Concepts of positive self-esteem are stressed and integrated into the curriculum. The granting of ATARI Home Computers will enable this center to become a permanent field testing site for newly developed software for young children.

CENTER FOR THE DEVELOPMENT
OF NON-FORMAL EDUCATION*
2109 EAST 2ND STREET
AUSTIN, TX 78702

CONTACT PERSON:
EMILY VARGAS ADAMS

▲ The Center for the Development of Non-formal Education (CEDEN) received ATARI Home Computer systems for work with the hispanic barrio community in the areas of ***early childhood and parent education.*** CEDEN is known for its research and development in non-formal education and a cash grant has been awarded to produce a video-taped documentary of this project.

COASTAL RIDGE RESEARCH
AND EDUCATION CENTER*
P.O. BOX 243
POINT ARENA, CA 95468

CONTACT PERSON:
ART SUSSMAN
(C/O HERBERT KOHL)

▲ An ATARI Home Computer was granted to the Center for developing ***educational games*** relating to allocations of energy sources, developing computer-related ***material for textbooks,*** and for enhancements in ***Appropriate Technology courses.***

COMPUTERKID, USA!*
P.O. BOX 310
MENLO PARK, CA 94025

CONTACT PERSONS:
BOB ALBRECHT
TIM FINGER

▲ ComputerKid, USA! is a model project of ***peer-teaching*** and ***community-based computer literacy education.*** The project will use the ATARI 400™ Home Computers and associated software to give hands-on experience with computers to members of organizations such as the Herbert Hoover Boys' Club, the Recreational Center for the Handicapped, and Brownie and Scout groups.

MORGAN MIDDLE SCHOOL*
1ST AVENUE & SPRAGUE STREET
ELLENSBURG, WA 98926

CONTACT PERSON:
CHUCK WAHLE

▲ The Computer Club at Morgan Middle School was granted an ATARI Home Computer system. Thirty sixth, seventh, and eighth grade ***students*** will use the system to ***write software*** for specific classroom needs. They expect their activities to motivate and encourage teachers to use computers too.

OFFICE OF APPROPRIATE TECHNOLOGY*
1600 NINTH STREET
SACRAMENTO, CA 95814

CONTACT PERSON:
DENNIS TRAGER

▲ The "New Possibilities" project, a mobile show representing an aspect of community-integrated education, received ATARI Home Computers as part of a traveling exhibit designed to inform the average Californian about the effectiveness of ***household appropriate technology.***

WEHR NATURE CENTER*
5879 SOUTH 92ND STREET
HALES CORNER, WI 53130

CONTACT PERSON:
MARIETTE NOWAK

▲ An ATARI Home Computer was granted to the Wehr Nature Center, a public ***environmental education*** facility that services over 50,000 people every year. The equipment will be used to evaluate current environmental related software, develop new environmental software, present environmental concepts graphically, and provide hands-on computer opportunity for visitors.

Elementary and Secondary Education

GEORGE WASHINGTON HIGH SCHOOL
DENVER PUBLIC SCHOOLS
655 S. MONACO BLVD.
DENVER, CO 80224

CONTACT PERSON:
IRWIN HOFFMAN

▲ High school students in a ***model math and computer program*** will use their grant of ATARI Home Computer systems to develop individual and group research projects in their own fields of interest. Extensible programming languages, such as FORTH, will be used to develop new "syntax" for use in other high school subjects: electronics, music, art, history, mathematics, and home economics. This project supports a major "model school" known for its innovations in computer education over the last twenty years.

NEW MEXICO RESEARCH EDUCATION
ENRICHMENT FOUNDATION (NMREEF)
SCIENCE EDUCATION DIVISION
8812 FOURTH STREET N.W.
ALAMEDA, NEW MEXICO 87114

CONTACT PERSONS:
JEFF NATHANSON
JUAN ABEYTA

▲ ATARI Home Computer systems and products were granted to the Science Education Division of NMREEF to study ***technological education opportunities for Hispanic and Native American students*** in New Mexico. The equipment has been placed in 11 high schools, two public middle schools, and two private middle schools in central New Mexico. It will be used to develop computer literacy, enhance information access, and develop a communication network between the schools.

NEW YORK ACADEMY OF SCIENCES	CONTACT PERSON:
2 EAST 63RD STREET	SIDNEY BOROWITZ
NEW YORK, NY 10021	

▲ A cash grant and ATARI Home Computers support the development of ***"The Model School of the Future,"*** a project to be established within Districts 2, 3, and 9 of the New York City School system. Project goals (based on the ideas of Dr. Seymour Papert) are to make a computer accessible to every student, to integrate the computer into the K-6 curriculum, and to allow the student to have increasing control over his or her learning.

RAPID ADVANCEMENT PROGRAM INC.*	CONTACT PERSON:
1523 E. MAIN STREET	VICKI STEPHENS
NACOGDOCHES, TX 75961	

▲ The Rapid Advancement Program, an alternative education program, was granted ATARI Home Computer systems to provide ***educational opportunities to significantly disadvantaged children.*** The equipment will be used to teach specific computer and thinking skills, to provide for teacher training, and to promote the development of the community.

Higher Education

BANK STREET COLLEGE OF EDUCATION*	CONTACT PERSONS:
CENTER FOR CHILDREN AND TECHNOLOGY	KAREN SHEINGOLD
610 WEST 112TH STREET	JANET KANE
NEW YORK, NY 10025	

▲ The Center for Children and Technology at Bank Street College was granted ATARI Home Computer systems to conduct research on how electronic technology, such as microcomputers, may influence children's learning, and to discover and develop ways of using this ***technology for the developmental and educational benefit of children.*** The Center is conducting studies which include the following: issues involved in microcomputer use in the schools; children's use of programming languages (Logo, PILOT, and BASIC); planning, problem solving, peer teaching, and collaboration by children in the classroom microcomputer experience; and children's use of word processing software to facilitate their writing and editing.

CALIFORNIA STATE UNIVERSITY*	CONTACT PERSON:
DEPARTMENT OF PSYCHOLOGY	DANIEL KEE
FULLERTON, CA 92634	

▲ ATARI Home Computers are being used by the Psychology Department at California State University to support research in developing problem solving and critical thinking skills in children. Commercially available computer simulations and games will be used and the results of the work are potential ***resources for the development of new educational software*** and information for teachers.

COLLEGE OF DESIGN – ART CENTER*	CONTACT PERSONS:
1700 LIDA STREET	JAMES F. BLINN
PASADENA, CA 91103	RICHARD HERTZ

▲ The College of Design-Art Center will use their grant of ATARI Home Computer systems to demonstrate ***computer graphics*** in communications, design, industrial design, illustration, fine arts, film, and photography.

GREENFIELD COMMUNITY COLLEGE	CONTACT PERSONS:
PROJECT TEME	DAN LAROSE
1 COLLEGE DRIVE	GREG VOUROS
GREENFIELD, MA 01301	

▲ A cash grant and ATARI Home Computer Systems are being used to support the application of the Totally Enclosed Modular Environments (TEME) project. This program is based on a model that applies principles of ***ecology*** and ***effective group process*** in combination with ***computer-integrated simulation*** (similar to the NASA Space-Shuttle flights) and community eco-action projects to increase ecological consciousness.

The effectiveness of the model will be evaluated through a series of workshops and events in a variety of educational settings. The results of this research will be incorporated in a curriculum package suitable for distribution. This package will include a Teacher/Coordinator's Curriculum Guide, a Student Guide, a User's Guide, and a TEME Shuttle-Orbiter Computer Software Series.

HARVARD UNIVERSITY*	CONTACT PERSON:
SCHOOL OF EDUCATION	INABETH MILLER
MONROE C. GUTMAN LIBRARY	
APPIAN WAY	
CAMBRIDGE, MA 02138	

▲ ATARI Home Computers were granted to the Media Division of the Harvard University Graduate School of Education to support the development of a ***Center for Interactive Technologies.*** The Center will establish a collection of microcomputers and microprocessor toys and games, build a collection of microcomputer software, conduct research and development in software, and publish a directory of microcomputer applications.

MILLS COLLEGE*	CONTACT PERSON:
DEPARTMENT OF EDUCATION	EDNA MITCHELL
OAKLAND, CA 94613	

▲ A cash grant and selected game cartridges for the ATARI Video Computer System™ were awarded to support a study on the ***effects of video games*** on families and individual family members.

NEW YORK UNIVERSITY	CONTACT PERSONS:
SCHOOL OF THE ARTS – ALTERNATE	MARTIN ELTON
MEDIA CENTER	RED BURNS
THE INTERACTIVE TELECOMMUNICATIONS	
PROGRAM	
725 BROADWAY, 4TH FLOOR	
NEW YORK, NY 10003	

▲ A cash grant and ATARI Home Computer systems will support the use of personal computers in the Interactive Telecommunication Program at New York University's School of the Arts. This program focuses on ***new application of interactive telecommunication systems,*** especially non-broadcast uses of television. ATARI Computers will be used for software development, training, and art experiments such as teletext and viewdata. Courses of study at the master's degree level are offered for students who will go on to leadership roles in developing, implementing, and managing these applications.

STANFORD UNIVERSITY	CONTACT PERSON:
GRADUATE SCHOOL OF BUSINESS	ROBERT SIMON
STANFORD, CA 94305	

▲ Equipment and a cash grant were awarded to the Stanford Graduate School of Business to explore the use of ATARI Home Computer systems as a powerful ***management and teaching tool*** for decision support in planning and control.

STANFORD UNIVERSITY	CONTACT PERSONS:
SCHOOL OF EDUCATION	ROBERT HESS
INTERACTIVE EDUCATIONAL TECHNOLOGY	DECKER WALKER
STANFORD, CA 94305	

▲ ATARI Home Computers were granted to the masters degree program in Interactive Educational Technology. This program provides intensive preparation in the principles and practical arts of ***designing interactive educational software for microcomputers.*** Students will tackle substantial software design problems that respond to a documented need among computer-using educators. Students will design software that will advance the state of the art educationally.

STANFORD UNIVERSITY	CONTACT PERSONS:
DEPARTMENT OF MATHEMATICS	HANS SAMELSON
STANFORD, CA 94305	NIRA HATIVA

▲ ***College mathematics materials*** for teaching key concepts of calculus are being developed for demonstration, tutoring, and self-paced learning. Illustrations generated on the ATARI Home Computer using its numeric and graphic capabilities will improve students' perceptions of abstract concepts, increase understanding by adding dimensions of visualization, and make mathematics relevant to future professional life.

STANFORD UNIVERSITY
DEPARTMENT OF PSYCHOLOGY
STANFORD, CA 94305

CONTACT PERSON:
MARK R. LEPPER

▲ ATARI Home Computers and a cash grant were awarded to the Stanford Psychology Department to support research on the ways computers are being used in education. This project seeks to find what ***cognitive and social/motivational effects are likely to result from these different uses.*** It will examine not only the immediate effectiveness of these approaches as instructional devices, but also their generalized consequences on children's learning, motivation, problem-solving abilities, and social attitudes outside the computer setting.

TEMPLE UNIVERSITY*
DEPARTMENT OF EDUCATIONAL
PSYCHOLOGY
PHILADELPHIA, PA 19122

CONTACT PERSON:
GLENN SNELBECKER

▲ The Educational Psychology Department of Temple University was granted an ATARI Home Computer system to explore education and training potential and to provide guidelines, including printed materials and disk, that will aid in designing more effective and attractive educational programs. Principles of learning and instructional theory will be applied to ***microcomputer-based educational materials*** and examples of different kinds of computer-based educational experiences will be provided.

TEMPLE UNIVERSITY*
DEPARTMENT OF EDUCATION
PHILADELPHIA, PA 19122

CONTACT PERSON:
PETER MARTORELLA

▲ An ATARI Home Computer was granted to develop courseware that demonstrates how ***microcomputers with an intelligent video system*** may be used efficiently with students at any grade level.

UNIVERSITY OF IOWA
MATHEMATICAL SCIENCES DIVISION
IOWA CITY, IA 52242

CONTACT PERSONS:
K. D. STROYAN
R. H. OEHMKE

▲ ATARI Home Computer systems and a cash grant were awarded to develop diskette courseware (software and self-instructional manuals) for a course in transformational geometry. ***Geometry and Microcomputers for Secondary Teachers*** will train secondary school teachers to perform geometric transformations (reflection, translation, rotation, and similarities) on a microcomputer and make tools available for teachers to design instructional materials for their local school geometry curricula.

Vocational and Special Education

CALIFORNIA DEPARTMENT
OF REHABILITATION*
830 "K" STREET, SUITE 221
SACRAMENTO, CA 95831

CONTACT PERSON:
ED ROBERTS

▲ ***Computer Programmer Training for Severely Physically Disabled*** provides training, work experience, and placement follow-through — placing 90% of its graduates. An ATARI Computer system was granted for use in this program and to its Director, Ed Roberts, who is totally paralyzed except for one hand.

EDUCATIONAL TESTING SERVICE*
ROSEDALE ROAD
PRINCETON, NJ 08541

CONTACT PERSON:
SUSAN M. WOOD

▲ An ATARI Home Computer system was granted to the Educational Testing Service for the development of a ***computer-based delivery system for assessment of skills.*** Research will be product-oriented and directed in the following areas: job skill aptitudes, screen learning, animation, animation for motivation, interactive statistics, computer assisted testing, and networks as a delivery system.

GRAFF AREA VOCATIONAL-TECHNICAL*
815 NORTH SHERMAN
SPRINGFIELD, MO 65802

CONTACT PERSON:
DON SLACK

▲ ATARI Home Computer systems were granted for use in the ***training of electronic technicians.*** Instructional modules will be developed to teach micro-architecture, graphically illustrate internal registers, and for interface projects in both Assembler Language and BASIC.

JOHNS HOPKINS UNIVERSITY*
APPLIED PHYSICS LABORATORY
JOHNS HOPKINS ROAD
LAUREL, MD 20810

CONTACT PERSON:
PAUL HAZAN

▲ The Johns Hopkins Applied Physics Laboratory received ATARI Home Computer systems which were then awarded to the winners of the first national competition on ***Personal Computing to Aid the Handicapped.*** The purpose of this national competition was to encourage creative development of hardware and software programs to aid the handicapped of all ages.

PRADER-WILLI SYNDROME ASSOCIATION*
C/O 30 ZAPATA WAY
PORTOLA VALLEY, CA 94025

CONTACT PERSON:
DELFIN (SAM) BELTRAN, M.D.

▲ The Prader-Willi Syndrome Association received an ATARI Home Computer system for implementation as an ***educational tool in working with children who have Prader-Willi Syndrome.***

REHABILITATION INSTITUTE OF CHICAGO*
345 E. SUPERIOR STREET
CHICAGO, IL 60611

CONTACT PERSON:
CHARLES T. MERBITZ

▲ ATARI Home Computer systems were granted to the Rehabilitation Institute of Chicago for use with ***people suffering brain damage and requiring rehabilitation.*** Patients will play computer games and the effects of the games on their rehabilitation will be analyzed, defined, and measured. Computer games will be related to specific disorders and suggestions will be made for therapeutic applications.

SAN QUENTIN
CALIFORNIA STATE PRISON*
SAN QUENTIN, CA 94964

CONTACT PERSON:
SEYMOUR W. FELDMAN

▲ ATARI Home Computers were granted to San Quentin Prison to address the ***educational needs of those in "lock-up" conditions.*** The equipment will be used to teach programming, provide drill and practice in the basic educational disciplines, and build skills through interactive educational software programs.

VETERANS ADMINISTRATION
MEDICAL CENTER*
BRAIN INJURY REHABILITATION UNIT
3801 MIRANDA AVENUE — BUILDING 205
PALO ALTO, CA 94304

CONTACT PERSON:
WILLIAM LYNCH

▲ The Brain Injury Rehabilitation Unit of the Veterans Administration Medical Center was granted an ATARI Home Computer system for work with ***computer applications as it applies to the diagnosis and treatment of brain disorders.*** This grant is an extension of their previous work using the ATARI Video Computer System™ and game cartridges.

WINSTON PREPARATORY SCHOOL*
4TH WEST 76TH STREET
NEW YORK, NY 10023

CONTACT PERSON:
ROBERTA MICHAELS

▲ The Winston Preparatory School received an ATARI Home Computer for use in a research project involving ***rehearsal strategies for learning-disabled students.***

**Discretionary "seed" grants, usually one or two ATARI Home Computers or systems, and/or a small cash grant.*

Guidelines for Proposals

The Atari Institute for Educational Action Research generates internal projects and supports external proposals. External proposals are supported primarily through donations of ATARI Computer products and, less frequently, through monetary assistance. This assistance may be for special projects or cooperative ventures with long-term action research potential, travel grants for educational conference presentations, and stipends for scholars-in-residence and student research internships.

Grant requests are received at the Institute in two phases. Requestors submit a brief abstract summarizing the project before the Institute invites a formal proposal. The abstract includes the project's objectives, the value added by the use of ATARI Computer products, and a summary of methods for implementation, evaluation, and dissemination. After screening by Institute staff, a select number of abstracts are chosen for development and a formal proposal is requested for review by the Institute's Board of Advisors.

Proposals should include the following (not to exceed 15 pages):

Abstract — A one to two page description of the particular project's objectives, methods, and evaluation.

Statement of the Problem or Needs Assessment — A clear description of the area of interest and its relevance.

Objectives — What is the intended outcome of the project?

Uniqueness — What does this particular project have to offer that is superior to others of a similar nature?

Methods — How is the project to be carried out?

Evaluation & Dissemination of Results — How will the effectiveness of this project be assessed, how will the results (or products arising from this project) be distributed to the intended audience, and how will others be assisted in implementing successful models in new sites?

Milestones — Time line for completing different phases of the intended project.

Facilities — What institutional facilities exist or will be funded by other sources to ensure success?

Budget — What equipment and or funding is required?

Key Personnel — Vitae or resumes from key people, demonstrating the necessary background and experience to ensure success.

Bibliography — A list of other accomplishments of project personnel in this field, as well as a list of other relevant research or projects.

The Board of Advisors, consisting of people with outstanding credentials in education, research, or the performing arts, as well as experience or interest in the use of computers and educational technology, currently reviews proposals three times per year. Recommendations for support are then made to the Executive Committee for final approval. The Executive Committee is composed of members holding executive management positions within Atari or Warner Communications Inc., Atari's parent company. ■

Information and grant applications may be obtained by writing to:

Sandra Williams
Manager of Program Development
Atari Institute for Educational
Action Research
Atari Incorporated
1196 Borregas Avenue, P.O. Box 427
Sunnyvale, California 94086

Atari Institute for Educational Action Research
Atari Incorporated
1196 Borregas Avenue — P.O. Box 427
Sunnyvale, California 94086

Bulk Rate
U.S. Postage
PAID
Permit No. 1
Sunnyvale, CA.

ATARI®
A Warner Communications Company